

# A BACKWARD GLANCE

## Robert Bacher: Taking a Stand for Science

By early 1943, General Leslie R. Groves and J. Robert Oppenheimer had finalized plans to establish a secret research laboratory in the mountains of northern New Mexico. Groves assumed that a US Army officer would operate the lab, with all the scientists accepting commissions. Oppenheimer, who stood ready to accept his commission as a lieutenant colonel, raised no objections. In fact, he even ordered several uniforms. But many scientists, with physicist Robert F. Bacher at the fore, objected to military control.

During the 1930s, Bacher had established himself as one of the leading physicists of his generation, working with many prominent scientists including Samuel Goudsmit, Enrico Fermi, and Hans Bethe. When World War II broke out, Bacher was asked to lead a division at the Massachusetts Institute of Technology's Radiation Laboratory (RadLab), where he played an important role in developing early radar technology. The experience he gained as an administrator, coupled with his scientific expertise, made him the ideal candidate to head Oppenheimer's Experimental Physics Division. But the specter of military control remained an insurmountable stumbling block to Bacher.

Oppenheimer realized Bacher's incredible value, stating, "His qualifications, and his historical connection [with our] project, make him our first choice, in priority and in importance." As such, he arranged for Bacher and fellow opposition leader I. I. Rabi to meet with Manhattan Project leaders to discuss military control. Bacher's position was simple: "Science does not mix with military management and while I do not object to joining the army I would at present not do so as a scientist."

General Groves eventually conceded, allowing UC to run Los Alamos. The relationship between the Manhattan Project and UC was formalized in a contract, signed April 20, 1943.



Bacher soon joined the project, but warned that his letter of acceptance would become his letter of resignation effective the day the army took over.

Civilians have operated the Laboratory ever since Bacher and a handful of his colleagues chose to take a stand for science more than 60 years ago.



Atomic Energy Commissioners (l to r) Robert F. Bacher, David E. Lillenthal (chairman), Sumner T. Pike, William W. Wamack, and Lewis L. Strauss.

Bacher's contribution to science continued after the war. He received the President's Medal for Merit in 1946 and was one of the first members of the Atomic

Energy Commission. During the Eisenhower administration, Bacher was a member of the US Science Advisory Committee.

He joined the Caltech faculty in 1949. At Caltech, he headed the physics department, also serving as vice president and provost. He also helped initiate the Owens Valley Radio Observatory, a leading radio astronomy facility, and was president of the American Physical Society and of the International Union of Pure and Applied Physics.

Bacher died in November 2004 at his home near Santa Barbara. [NWJ](#)

*Point of contact:*

*Alan B. Carr, 664-0870, [abcarr@lanl.gov](mailto:abcarr@lanl.gov)*